1116-05-288 **Poppy Immel***, School of Mathematical Sciences, Rochester Institute of Technnology, Rochester, NY 14623. *Distinguishing Numbers of 2-Trees.* Preliminary report.

Given a graph G, a k-coloring is a function from the vertex set to the subset of integers 1,2,..,k. A k-coloring of G is distinguishing every nontrivial automorphism of G maps some vertex to a vertex with a different color; that is, no nontrivial automorphisms of G are color-preserving. The distinguishing number of a graph G, denoted $D(G)$, is the minimum k such that G has a distinguishing k-coloring. We adapt a recursive and enumerative approach developed independently by Cheng, and Arvind and Devanur, to prove that distinguishing numbers can be computed in polynomial time on the family of 2-trees. (Received August 22, 2015)